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(54) Title: THE ENZYMATIC METHOD OF MAKING 1,2-DIOL DERIVATIVES AND THEIR ESTERS WITH SUCCINE ANHYDRIDE

(57) Abstract: The present invention relates to a new process for the preparation of optically active alcohols represented by the general formula 2 and their esters represented by the general formula 3 in scheme 1. In more detail, this invention relates to the process for the preparation of optically active alcohols and their esters which are used as pharmaceutical intermediates by reacting the hydroxyl group stereospecifically by lipase after adding racemic alcohols represented by the general formula 1 and succinic anhydride as an acylating agent to the organic solvent. According to this invention, the primary hydroxyl group of 1,2-diols is transformed by other functional group and the secondary hydroxyl group is esterified stereospecifically with succinic anhydride as an acylating agent. Optically active alcohols and their esters of high optical purity in high yield can be produced by using succinic anhydride as an acylating agent because alcohols can be separated from their esters more easily than those of other conventional methods.

AMENDED CLAIMS
[received by the International Bureau on 28 February 2005 (28.02.2005));
original claim 1 cancelled; original claim 2 unchanged (1 page)

CLAIMS

What is claimed is:

1. A process for preparing optically active alcohols represented by the general formula 2 and their esters represented by the general formula 3 from racemic alcohols represented by the general formula 1, whose secondary hydroxyl group is esterified stereospecifically by lipase with succinic anhydride as an acylating agent in the organic phase, wherein R is CH_3, N_3CH_2 or CH_3CH_2 and X is trityl, t-butyl, tosyl or nosyl.

2. A process for preparing optically active alcohols represented by the general formula 2 and their esters represented by the general formula 3 from racemic alcohols represented by the general formula 1, whose secondary hydroxyl group is esterified stereospecifically by lipase with succinic anhydride as an acylating agent in the organic phase, wherein R is $ClCH_2$ and X is trityl, t-butyl or nosyl.